

REMARKS

Claims 1-20 are pending in the application and stand rejected.

Rejection of Claims 6-9 and 11-19 under 35 U.S.C. §112, Second Paragraph

Claims 6-9 and 11-19 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner believes that these claims omit essential elements. In response, Applicant has amended claims 6, 7, 8, 9, 11, 18 and 19 to add these elements.

With regard to claim 11, the Examiner considers there to be insufficient antecedent basis for the term "the agitator" in line 7 of claim 11. Applicant has amended claim 11 in a manner that should remove the rejection.

Rejection of Claim 1 under 35 U.S.C. §103 over Pasteur and Levin

Claim 1 stands rejected as being obvious in view of the Pasteur and Levin references. The Examiner considers Pasteur to disclose a mosquito misting system with a fluid reservoir 1, misting nozzle 79, conduit 77, pump 20, and agitator 12. The Examiner notes that Pasteur does not disclose a controller, although he considers a controller to be "inherent." The Examiner further considers the Levin reference to disclose a PC compatible computer to automate timed operation of a pump and agitator. He concludes that it would have been obvious to have provided a computer to Pasteur's device to automate timed operation of it.

Applicant traverses the rejection. Pasteur and Levin cannot be properly combined, and even if they were, they would not reveal the subject matter of the claimed invention. Neither reference discloses the element of an agitator having a pump nor drawing outside air into the fluid reservoir, as claim 1 recites. In Applicant's described device, outside

atmospheric air is drawn into the fluid reservoir through an air inlet 50 by a pump and then transmits it along air feed tube 46 to the outlet 48. See specification, p. 7, lines 16-20.

Pasteur's agitator 12, on the other hand, does not have a pump and does not draw outside air into a fluid reservoir. Instead, Pasteur uses the exhaust gases from the engine 8 to agitate the insecticide. (Pasteur, col. 2, lines 38-45). Alternatively, Pasteur uses "compressed air" to agitate (see Pasteur, col. 2, lines 46-50). Again, outside air is not drawn in, and no pump is used.

Likewise, Levin does not teach or suggest anywhere agitation of fluid by drawing in outside air or the use of a pump to do so. Levin's 'agitator' 34 is profoundly different in structure and operation from that shown in Pasteur or that of the present invention. Levin's agitator 34 includes a motor element 50 that drives an eccentric cam 52 to physically move the rocker platform 38 of the processing assembly 12. See col. 6, lines 9-15. Clearly, nothing in either Levin or Pasteur would teach or suggest to one of skill in the art to "automate timed operation of a pump and agitator. . . ." to draw outside air into an insecticide reservoir, as the Examiner concludes. Levin's apparatus does not perform that function at all and is, in fact, incapable of it.

Applicant further submits that Levin is not properly applicable in the Examiner's obviousness analysis because it is non-analogous art. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." MPEP §2141.01(a); In re Oetiker, 977 F. 2d 1443, 1446 (Fed. Cir. 1992). "A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in

considering his problem.” MPEP § 2141.01(a); Wang Laboratories Inc. v. Toshiba Corp., 933 F.2d 858 (Fed. Cir. 1993).

In this case, Levin is neither in the field of applicant’s endeavor nor is it reasonably pertinent to the particular problem with which Applicant is concerned (adequate mixing of insecticide fluid). Levin’s device relates to medical instrumentation for in vitro diagnostics, including conducting accurate assay for the in vitro diagnosis of infectious diseases. (Levin, col. 1, lines 5-9). Levin’s agitator has a very different purpose and function from the agitator in either Pasteur or the present invention. Levin’s agitator 34 is used to “allow fluid to distribute evenly across the surface area of the membrane and be drawn through substantially the entire thickness of the membrane.” (Levin, col. 3, lines 4-6). Levin’s agitator 34 does not have anything to do with the problem of assuring adequate mixing of insecticide fluids. It merely rocks the rocker platform 38 of the processing assembly. Levin is concerned only with evenly distributing fluid across the surface area of a membrane, and, therefore, it is not reasonably pertinent to the problems that both Pasteur and the present invention are. Levin would not have logically commended itself to one of ordinary skill in the art in considering the problem of mixing insecticide fluids.

Further, Applicant submits that Pasteur and Levin cannot properly be combined because there is no teaching of suggestion in the prior art to make the combination that the Examiner suggests. Pasteur explicitly teaches manual operation of his sprayer device. Pasteur explains that “[t]he stopper 4, controlling the distribution of the solution to the projection duct 5, is controlled by means of a pedal, which is easier for the operator whose hands are occupied by the projection nozzle.” Pasteur, col. 3, lines 48-52 (emphasis added). There are no timed cycles suggested anywhere within Pasteur. Applicant submits that it would not even be desirable to automate Pasteur’s device to operate on a

timed cycle because the device is operated by an individual who must manually aim the nozzle and activate the pedal to distribute the insecticide solution. See Pasteur at col., 4, lines 11-17. Automating Pasteur's spraying device to operate according to a timed schedule would be counterproductive because the individual operating the device would need to wait for the device to operate according to its timed schedule rather than being able to operate it manually when desired.

Applicant respectfully requests that the Examiner remove this rejection.

Rejection of Claims 1, 5, 6, and 8-10 under 35 U.S.C. §103 over Bryan et al. and Pasteur

Claims 1, 5, 6, and 8-10 stand rejected for obviousness over a combination of the Bryan et al. and Pasteur references. The Examiner considers Bryan et al. to teach a mosquito misting system having a fluid reservoir 18, misting nozzle 7, conduit 23, pump 19, computer controller 8, timer, and transmitter 25. He admits that Bryan discloses a blower 10, but not an agitator. However, the Examiner also considers Pasteur to teach returning a portion of air from a blower 6 to an agitator 12 to agitate fluid in the tank 1. Thus, he concludes that it would have been obvious to have provided a return portion of air from blower 10 in Bryan's device to the tank 18 and to an agitator, as taught by Pasteur, to agitate the fluid in the tank 18.

Applicant traverses the rejection. At least the agitator element of independent claim 1 is not taught or suggested by these references, either individually or in combination. As noted previously, Pasteur does not agitate insecticide fluid by drawing outside air into the fluid reservoir, as claims 1, 5, 6, and 8-10 recite. Pasteur's device also lacks the agitator pump, which is recited in claim 1. Bryan does not teach agitating his insecticide at all, and

the Examiner points to no teaching or suggestion in the art for one to make this particular modification to Bryan's device.

Applicant submits that, to one of skill in the art, Bryan may actually teach against agitation of the insecticide, as such might change the principal of operation for Bryan's device or render it inoperable for its intended purpose. Bryan explains that "[a] desired particle size must be maintained while providing varying flow rates, which are required in order to maintain the same concentration of insecticide as the vehicle varies its speed while spraying." Bryan, col. 2, lines 36-40. Applicant submits that agitation, particularly vigorous agitation, of the insecticide within the tank 18 of Bryan's system might alter the particle size of the insecticide being sprayed via mixing, particle degradation, and so forth and interfere with the real time particle measurement that is being used to control the system. This might, in fact be harmful, as Bryan suggests:

Real-time particle size measurement is utilized as the primary variable in the control loop to ensure that the spray system 2 does not emit an insecticide particle size 11 that may be a danger to the environment and to reduce insecticide waste from a particle size 11 that does not provide the maximum mosquito kill.

Bryan, col. 5, lines 14-19. Applicant respectfully requests that the Examiner reconsider and remove the rejection.

Rejection of Claim 1 under 35 U.S.C. §103 over Dugan, Underwood and Levin

Claim 1 also stands rejected for obviousness over a combination of the Dugan et al., Underwood, and Levin references. The Examiner considers Dugan to disclose a mosquito misting system having a fluid reservoir 48, a misting nozzle 44, conduit 56, 46, computer controller 18, and timer 52. He admits that Dugan does not disclose an agitator. He considers Underwood, however, to disclose an agitator 14 for mosquito insecticide in tank 12. He further considers Dugan to "implicitly teach" complete computer control and Levin

to explicitly teach using a PC compatible computer to automate timed operation of a pump and agitator. He concludes that it would have been obvious to have provided an agitator to Dugan's device, as taught by Underwood and Levin to automatically agitate the spray fluid.

Applicant traverses the rejection. Dugan does not teach or suggest a mosquito misting system. Mosquito abatement is not even mentioned in Dugan's disclosure. Dugan describes a root treatment system for indoor plants, and there is no indication that Dugan's apparatus would be suitable or capable of mosquito abatement or misting.

Further, Underwood does not teach the claimed agitator element of claim 1. In Underwood, the structure and operation of the agitator 14 is not described in any detail within the specification. Figure 1 merely shows it to be a propeller of some type that is partially disposed within the holding tank 12. Of course, this structure does not have a pump or any means for drawing outside air into the holding tank 12 and, therefore, clearly does not meet the limitations of claim 1.

Rejection of Claims 2, 11-13, 17-18, and 20 under 35 U.S.C. §103 over Bryan, and Pasteur or Dugan and Underwood, Levin, and Khurgin

Claims 2, 11-13, 17-18 and 20 stand rejected for obviousness over a combination of Bryan in view of Pasteur or Dugan, and in view of Underwood and Levin, as applied to claim 1 above, and further in view of the Khurgin reference. Specifically, the Examiner considers Bryan, in view of Pasteur, to disclose the limitations of the claimed invention with the exception of the float sensor assemblies. He also considers Dugan in view of Underwood and Levin to disclose the claimed invention except for the float sensor assemblies. However, he considers Figure 14 of Khurgin to teach a plurality of float level sensors. The Examiner concludes that it would have been obvious to provide a plurality of

float level assemblies in Bryan/Pasteur's device or Dugan/Underwood/Levin's device, as taught by Khurgin to sense the level of liquid in the tank.

Applicant traverses the rejection. Applicant incorporates herein the arguments made above with respect to the inability of Bryan, combined with either Pasteur or Dugan, to teach the subject matter of claim 1. Claim 2 should be allowable at least as depending from an allowable base claim.

Independently, Applicant submits that Khurgin does not disclose or suggest the subject matter of claims 2, 11-13, 17-18 or 20, as the claims have been amended herein. Claims 2, 11 and 20, as amended, recite a level sensor assembly having a plurality of floating sensor assemblies. This feature is not taught or suggested by Khurgin. The plurality of floating sensor assemblies (i.e., float sensors 56, 58, 60, 62) is clearly described in the present specification and shown in Figures 1 and 2. Khurgin, however, teaches only a single float 92 on rod 94.

Further, Applicant submits that the Examiner has not even attempted to show any teaching or suggestion in the art for combining Khurgin with the other cited references. Therefore, even if Khurgin did disclose the claimed plurality of floating sensors, no *prima facie* case of obviousness would exist.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex Parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

MPEP §2142. There is simply no teaching or suggestion in the cited art for one to use the level sensor assembly of Khurgin with the mosquito spray devices described in Pasteur or

Bryan. From Applicant's reading of those references, there is no such teaching or suggestion in either of them, and the Examiner has provided no line of reasoning to show why one of skill in the art would make the claimed combination. Applicant submits that the Examiner has merely taken the suggestion that is supplied by Applicant's own specification and used impermissible hindsight to reconstruct Applicant's invention.

Applicant submits further that the Khurgin reference is non-analogous and should not be available as prior art against Applicant's claimed invention. Khurgin's described metering apparatus is neither in the field of applicant's endeavor nor reasonably pertinent to the particular problem with which Applicant is concerned. In the present application, Applicant is concerned with mosquito abatement. Khurgin's invention is directed to the very different problem of measuring "irregular liquid flow on a 'flow-through' basis and determining the total liquid volume over a given time interval." Khurgin, col. 1, lines 6-8. Khurgin considers his invention to be "particularly well-suited for the measurement of milk yield of individual cows in a dairy farm and can be used in conjunction with automatic milking machines of conventional design." Khurgin, col. 1, lines 8-12. Applicant submits that, not only is Khurgin in a different field from Applicant's endeavor, it is not even reasonably pertinent to the particular problem with which Applicant is concerned, and Khurgin would not have commended itself to the attention of one of skill in the mosquito abatement art.

Rejection of Claim 3 under 35 U.S.C. §103 over Bryan, Pasteur, Dugan, Underwood, Levin, and Gross

Claim 3 stands rejected for obviousness in view of a combination of the Bryan, Pasteur, Dugan, Underwood, Levin, and Gross patents. The Examiner considers the first five references to disclose the claimed invention with the exception of the pressure switch.

However, he considers Gross to teach a pressure switch 8 and controller 15 to stop dry run of pump 16. He concludes that it would have been obvious to have provided a pressure switch to the device of Bryan/Pasteur/Dugan/Underwood/Levin, as taught by Gross, to prevent dry run of the pump.

Applicant traverses this rejection as well. First, Applicant incorporates here the arguments made previously with respect to the ability of Bryan, Pasteur, Dugan, Underwood, and Levin to render obvious the subject matter of independent claim 1. Further, however, Gross does not teach or suggest the element(s) being added in dependent claim 3. Claim 3 recites a mosquito misting system having “. . . a pressure switch operably associated with the fluid conduit to detect a pressure drop within the conduit” Gross is clear throughout his specification that his sensor 8 does not detect pressure within the conduit at all. Rather, the sensor 8 includes first and second conductive fittings 10, 12 that “serve as terminals, and are electrically connected to an electronic detection device 15 or control unit that applies a voltage across the fittings 10, 12 and senses current flow therebetween” Gross, col. 2, lines 35-39. “Accordingly, current flow is used by the detection device 15 to determine whether sufficient water is present in sensor 8.” Gross, col. 2, lines 18-20. Clearly, Gross’s device does not at any point detect pressure within the conduit. Applicant respectfully requests that the Examiner remove the rejection.

Rejection of Claim 4 under 35 U.S.C. §103 over Dugan, Underwood, Levin, and Siemenski

Claim 4 has been rejected for obviousness over a combination of Dugan, Underwood, and Levin, as applied to claim 1, and further in view of the Siemenski reference. Specifically, the Examiner considers Dugan, Underwood and Levin to disclose

the limitations of the claimed invention except for the remote control. He finds Siemenski to teach a remote control 101 for a controller 102 for control using the internet. He concludes that it would have been obvious to have provided a remote control to Dugan/Underwood/Levin's device, as taught by Siemenski, for remote control using the internet.

Applicant traverses the rejection. Claim 4 should be allowable at least as depending from an allowable base claim (claim 1). Further, the Examiner has again not pointed to any motivation or suggestion in the art for making the proposed combination. Applicant submits that the Examiner is merely using hindsight, based upon the teachings of Applicant's specification to reconstruct the claimed invention from assorted references.

Rejection of Claims 14-15 under 35 USC §103 over Bryan, Pasteur, Dugan, Underwood, Levin, Khurgin, and Gross

Claims 14 and 15 have been rejected for obviousness over a combination of Bryan, Pasteur, Dugan, Underwood, Khurgin, and Gross. The Examiner considers the first five references to disclose the claimed invention with the exception of the float sensor assemblies. As written in the Action, the Examiner considers Gross to teach float sensor assemblies. As Applicant best understands this rejection, the Examiner concludes that it would have been obvious to have added a pressure switch to this combination, as taught by Gross to prevent dry run of the pump.

Applicant responds by noting that it believes that the Examiner intended to apply Gross to teach the use of a pressure switch rather than float sensor assemblies. In response, Applicant traverses the rejection. As explained above with respect to the rejection of claim 3, Gross does not teach or suggest "... a pressure switch operably

associated with the fluid conduit to detect a pressure drop within the conduit” as claims 14-15 recite.

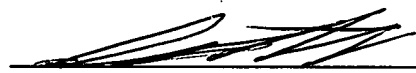
Rejection of Claim 16 under 35 USC §103 over Dugan, Underwood, Levin, Khurgin, and Siemenski

Claim 16 stands rejected as obvious in view of a combination of Dugan, Underwood, Levin, Khurgin, and Siemenski. The Examiner believes that Dugan/Underwood and Levin/Khurgin disclose the claimed invention except for the remote control element. He also believes that Siemenski teaches a remote control 101 for controller 102 for control using the internet. He concludes that it would have been obvious to have provided a remote control to the combinations as taught by Siemenski.

Applicant traverses the rejection. Claim 16 should be allowable at least as depending from an allowable claim 11.

Respectfully submitted,

Dated: September 14, 2005


Shawn Hunter
Reg. No. 36,168
P.O. Box 270110
Houston, Texas 77277-0110
Telephone: 713-349-0766
Facsimile: 713-349-0796